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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte PAUL LAYZELL, ELDAN GOLDENBERG,
DAVID TREVOR CLIFF and JOHN WILLIAM LUMLEY

Appeal 2008-0722
Application 10/652,787
Technology Center 2100

Decided: July 31, 2008

Before JAMES D. THOMAS, HOWARD B. BLANKENSHIP,
And LANCE LEONARD BARRY, *Administrative Patent Judges*.
THOMAS, *Administrative Patent Judge*.

DECISION ON APPEAL

This is appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claim 1 through 36. We have jurisdiction under 35 U.S.C. § 6(b).

As best representative of the disclosed and claimed invention, independent claim 1 is reproduced below:

1. A method of composing a page, or a portion of a page, of a document, by a programmed processor comprises:

receiving a definition of a plurality of objects to be fitted on to the page and dimensional attributes of each of the objects;

establishing an arrangement of the plurality of objects such that each object lies within a separate rectangle of a slicing structure dissection of a rectangular area;

receiving and preparing for evaluation for the plurality of objects a function which provides a total cost of an arrangement of the plurality of objects based on one or more properties of the arrangement; and

finding a slicing structure arrangement of the plurality of objects with a minimised total cost by means of an iterative process.

The following references are relied on by the Examiner:

Geigel

EP 1 220 531

July 3, 2002

Wong, "A New Algorithm For Floorplan Design", IEEE 23rd Design Automation Conference, 1988, pp 101-107.

Claims 1 through 36 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the Examiner relies upon Geigel in view of Wong.

Rather than repeat verbatim the positions of the Appellants and the Examiner, reference is made to the Brief and Reply Brief for Appellants' positions, and to the Answer for the Examiner's positions.

OPINION

For the reasons set forth by the Examiner in the Answer, as expanded upon here, we sustain the rejection of all claims on appeal under 35 U.S.C. § 103. Because common features are set forth among independent claims 1, 20, 21, and 36; among independent claims 22, 28, and 29; and among independent claims 30, 34, and 35, the Examiner's positions with respect to these grouped claims have been collectively considered in the formulation of the rejection in the Answer and the corresponding responsive remarks therein as well. As to each of these independent claims, Appellants present essentially the same arguments as to each of them. Therefore, we take as a representative claim, the subject matter of independent claim 1.

Appellants have the burden on appeal to the Board to demonstrate error in the Examiner's position. *See In re Kahn*, 441 F.3d 977, 985-86 (Fed. Cir. 2006) ("On appeal to the Board, an applicant can overcome a rejection [under § 103] by showing insufficient evidence of *prima facie* obviousness or by rebutting the *prima facie* case with evidence of secondary indicia of nonobviousness.") (quoting *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998)).

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007).

The Supreme Court reaffirmed principles based on its precedent that “[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR*, 127 S. Ct. at 1739. The operative question in this “functional approach” is thus “whether the improvement is more than the predictable use of prior art elements according to their established functions.” *Id.* at 1740. The Court noted that “[c]ommon sense teaches . . . that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* at 1742.

The Federal Circuit recently concluded that it would have been obvious to combine (1) a device for actuating a phonograph to play back sounds associated with a letter in a word on a puzzle piece with (2) a processor-driven device capable of playing the sound associated with a first letter of a word in a book. *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007). In reaching that conclusion, the Federal Circuit recognized that “[a]n obviousness determination is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not.” *Id.* at 1161 (citing *KSR*, 127 S. Ct. 1727, 1739 (2007)). The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was “uniquely challenging or difficult for one of ordinary skill in the art” or “represented an unobvious step over the prior art.” *Id.* (citing *KSR*, 127 S. Ct. at 1740-41).

In the absence of separate arguments with respect to claims subject to the same rejection, those claims stand or fall with the claim for which an argument was made. *See In re Young*, 927 F.2d 588, 590 (Fed. Cir. 1991). *See also* 37 C.F.R. § 41.37(c)(1)(vii)(2004).

Dovetailing with this precedent, we note further that the test for obviousness has been further characterized as not whether the features of a secondary reference may be bodily incorporated into the structure of a primary reference. It is also not that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. *In re Keller*, 642 F.2d 414, 425 (CCPA 1981); *In re Young*, 927 F.2d 588, 591 (Fed. Cir. 1991).

The prior art relied on to prove obviousness must be analogous art. As explained in *Kahn*,

the ‘analogous-art’ test . . . has long been part of the primary Graham analysis articulated by the Supreme Court. *See Dann [v. Johnston]*, 425 U.S. [219,] 227-29 (1976), *Graham*, 383 U.S. at 35. The analogous-art test requires that the Board show that a reference is either in the field of the applicant’s endeavor or is reasonably pertinent to the problem with which the inventor was concerned in order to rely on that reference as a basis for rejection. *In re Oetiker*, at 1447. References are selected as being reasonably pertinent to the problem based on the judgment of a person having ordinary skill in the art. *Id.* (“[I]t is necessary to consider ‘the reality of the circumstances,’ - in other words, common sense-in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the invention.” (quoting *In re Wood*, 599 F.2d 1032 (C.C.P.A. 1979))).

Kahn, 441 F.3d at 986-87. *See also In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992) (“[a] reference is reasonably pertinent if, even though it may be in a different field from that of the inventor’s endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor’s attention in considering his problem.”).

The Examiner’s analysis of Geigel and Wong in the statement of the rejection beginning at page 3 of the Answer appears to us to be consistent with the requirements of the above-noted case law in addition to the Examiner addressing Appellants’ remarks urging improper combinability beginning at page 10 of the principal Brief on appeal. The Examiner persuasively readdresses this issue beginning at page 13 of the Answer.

As noted earlier, with respect to the positions set forth in the principal Brief on appeal, and as applicable to the positions set forth in the Reply Brief, Appellants essentially argue that the references are not properly combinable within 35 U.S.C. § 103. Overall, the common/same position of Appellants throughout all the arguments made with respect to each of the independent claims is that the teachings of Geigel and Wong are not properly combinable at all. We strongly disagree with these views.

Geigel’s teachings relate to an automatic layout of images in digital albums by utilizing page creator modules and placement modules each of which has respective genetic engines or algorithms to calculate, based upon mathematical functions, various layout criteria in a recursive or iterative manner such as generally discussed at the middle of page 6 in paragraph [0024]. Geigel’s teachings also relate to image organization and page layout to otherwise fit various image objects upon various album pages.

As recognized by the Examiner, Geigel does not teach the use of a slicing structure dissection approach to rectangular album pages such as recited in the representative independent claim 1 on appeal. On the other hand, in what may be fairly characterized as analogous art in accordance with the above-noted case law, Wong teaches optimization of the floorplan design or layout of exemplary VLSI integrated circuit structures upon a substrate. This optimization technique is in fact a minimization of area among the available real estate on the substrate. Therefore, the artisan would have well appreciated that Wong relates to general floorplan design and placement of various rectangular modules or object modules within a definable region such as the pages of a document as in Geigel. Based upon fixed or variable rectangular modular shapes, the total area occupied by the respective modules may be minimized. This is generally set forth in the introduction paragraph at column 1 of page 101 of Wong. Wong introduces the concept of rectangular dissection in the manner claimed to achieve the best fit by minimizing the cost and/or area based upon the discussion at least at pages 103-104. This is done in an iterative manner to achieve the best or optimal fit for a generalized floorplan design.

Therefore, in view of these observations and teachings of Wong in addition to the Examiner's reliance thereof, we find that the artisan would have found it obvious to have utilized the slicing structure arrangement from the general floorplan design techniques of Wong in the corresponding layout requirements for pages of documents in Geigel.

We are not persuaded by Appellants' positions first set forth at the bottom at page 11, for example, of the principal Brief that Wong is limited to its VLSI circuit layout techniques. Additionally, we do not agree with Appellants' backward characterization that Geigel provides no suggestion for adopting or incorporating approaches used in VLSI layout/floorplan design techniques as taught in Wong with his own approaches. On the contrary, it is Wong who suggests the applicability of his generalized layout/floorplan teachings to enhance or otherwise improve upon the layout techniques already set forth in Geigel. Since Wong teaches to iteratively, as claimed, minimize the cost/area, the artisan would have found it obvious to have utilized Wong's approach in Geigel to achieve the overall arrangements set forth based upon cost functions in independent claims 1, 20, 21, and 36, the area limitations of independent claims 22, 28 and 29 as well as the area limitations and proximity of various objects in independent claims 30, 34, and 35.

The corresponding arguments in the Reply Brief relating to the alleged non-combinability of the teachings of Geigel and Wong do not persuade us of patentability of the respective claims and are not consistent with the above-noted case law.

Appellants' remarks made with respect to dependent claims 2 through 19 in a general manner at pages 12 and 13 of the principal Brief on appeal are not persuasive of their respective patentability. These remarks essentially rely upon general arguments of patentability and, as set forth at the top of page 13 of the principal Brief, appear to only reargue the features already set forth in their parent independent claim 1. These remarks also do

not address or otherwise challenge the Examiner's correlations of the features of these dependent claims to the teachings in Geigel and/or Wong as set forth in the Examiner's statements of the rejection of the noted claims.

In view of the foregoing, the decision of the Examiner rejecting claims 1 through 36 under 35 U.S.C. § 103 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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